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EXAMINER	
LAFORGIA, CHRISTIAN A	

ART UNIT	PAPER NUMBER
2131	12

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/471,637	BACHRACH, YUVAL	
	Examiner	Art Unit	
	Christian La Forgia	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 March 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. The amendment filed on 21 August 2003 is noted and made of record.

2. Claims 1 through 21 are presented for examination.

Drawings

3. Applicant is reminded that the Patent and Trademark Office no longer makes drawing changes and that it is applicant's responsibility to ensure that the drawings are corrected in accordance with the instructions set forth in Paper No. 7, mailed on 07 April 2003.

Response to Arguments

4. Applicant's arguments filed 21 August 2003 have been fully considered but they are not persuasive.

5. In response to applicant's argument that a slow mode PHY-to-MAC word having a transmit cycle field allows a particular embodiment to support many data speeds without changing the frequency of the clock, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

6. As per the Applicant's argument that the prior art does not teach a transmit cycle field indicating to the MAC whether or not it is to include data in the next MAC-to-PHY word, the Examiner kindly disagrees and directs the Applicant's attention to column 17, lines 9 through 34.

In this cited section the MAC sends the PHY two types of data. First, the MAC is responsible for informing the PHY which speed the data will be received at, i.e. 10Base-T, 10Base-T2, etc. The MAC also returns to the PHY data concerning how it will function, such as a network monitor or a receiver for broadcast and multicast packets. Therefore, the Examiner believes that the prior art teaches a transmit cycle field indicating to the MAC whether or not it is to include data in the next MAC-to-PHY word.

7. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

8. See further rejections that follow.

Claim Rejections - 35 USC § 102

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 1, 2, 8, 9, 15, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent No. 6,427,173 to Boucher et al., hereinafter Boucher.

11. As per claim 1, Boucher teaches a MAC comprising:

at least one PHY-to-MAC port to receive signals indicative of PHY-to-MAC words (Figure 12, 13 [parts 210, 240, 242, 244], 21 [parts 2100, 2109, 402]; column 24, line 60 to column 25, line 16); and,

at least one MAC-to-PHY port to transmit signals indicative of MAC-to-PHY words (Figure 12, 13 [parts 210, 240, 242, 244], 21 [parts 2100, 2109, 402]; column 24, line 60 to column 25, line 16);

wherein the PHY-to-MAC words include slow mode PHY-to-MAC words, wherein a slow mode PHY-to-MAC word received by the MAC from a PHY includes a transmit cycle field to indicate whether the MAC is to provide data in a next MAC-to-PHY word transmitted by the MAC to the PHY subsequent to the MAC receiving the slow mode PHY-to-MAC word (Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34; column 11, lines 22-46; column 17, lines 9-34).

12. As per claim 2, Boucher teaches the PHY-to-MAC layer words include equal speed mode PHY-to-MAC words, wherein an equal speed mode PHY-to-MAC word received by the MAC from the PHY indicates that the MAC is to provide data in the next MAC-to-PHY word (Abstract; Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34).

13. As per claim 8, Boucher teaches a PHY to transmit and receive signals propagated on a medium, and to communicate with a MAC via PHY-to-MAC words and MAC-to-PHY words, the PHY comprising:

at least one MAC-to-PHY port to receive signals indicative of MAC-to-PHY (Figure 12, 13 [parts 210, 240, 242, 244], 21 [parts 2100, 2109, 402]; column 24, line 60 to column 25, line 16); and,

at least one PHY-to-MAC port to transmit signals indicative of PHY-to-MAC words (Figure 12, 13 [parts 210, 240, 242, 244], 21 [parts 2100, 2109, 402]; column 24, line 60 to column 25, line 16);

wherein the PHY-to-MAC words include slow mode PHY-to-MAC words, wherein a slow mode PHY-to-MAC word transmitted by the PHY and received by the MAC includes a transmit cycle field to indicate whether the MAC is requested by the PHY to provide data for transmission on the medium in a next MAC-to-PHY word transmitted by the MAC to the PHY subsequent to the MAC receiving the slow mode PHY-to-MAC word (Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34; column 11, lines 22-46; column 17, lines 9-34).

14. As per claim 9, Boucher teaches the PHY-to-MAC layer words include equal speed mode PHY-to-MAC words, wherein an equal speed mode PHY-to-MAC word transmitted by the PHY to the MAC indicates that the MAC is to provide data in the next MAC-to-PHY word (Abstract; Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34).

15. As per claim 15, Boucher teaches a computer system comprising:

a MAC (Figure 12, 13 [parts 210, 240, 242, 244], 21 [parts 2100, 2109, 402]; column 24, line 60 to column 25, line 16); and,

a PHY to receive and transmit signals propagated on a medium and connected to the MAC so that the MAC provides MAC-to-PHY words to the PHY and the PHY provides PHY-to-MAC words to the MAC (Figure 12, 13 [parts 210, 240, 242, 244], 21 [parts 2100, 2109, 402]; column 24, line 60 to column 25, line 16);

wherein the PHY-to-MAC words and the MAC-to-PHY words are synchronously paired so that the MAC provides one MAC-to-PHY word to the PHY while the PHY provides one

PHY-to-MAC word to the MAC (Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34; column 11, lines 22-46; column 17, lines 9-34);

wherein the PHY-to-MAC words include slow mode PHY-to-MAC words having a transmit cycle field (Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34; column 11, lines 22-46; column 17, lines 9-34; column 13, lines 37-55; column 17, lines 35-67);

wherein if the transmit cycle field of a first slow mode PHY-to-MAC word is set to a first value, the first slow mode PHY-to-MAC word being synchronously paired with a first MAC-to-PHY word, then the MAC is requested by the PHY to provide transmit data in a second MAC-to-PHY word for transmission over the medium, where the second MAC-to-PHY word succeeds the first MAC-to-PHY word, and if the transmit cycle field of the first slow mode PHY-to-MAC word is set to a second value different from the first value, then the MAC is requested by the PHY not to include transmit data in the second MAC-to-PHY word (Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34; column 11, lines 22-46; column 17, lines 9-34).

16. As per claim 16, Boucher teaches the PHY-to-MAC layer words include equal speed mode PHY-to-MAC words (Abstract; Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34).

Claim Rejections - 35 USC § 103

17. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

18. Claims 3, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boucher in view of Rubin.

19. As per claim 3, Boucher does not teach wherein the PHY-to-MAC words and MAC-to-PHY words are each 12 bits wide.

20. Rubin teaches wherein the PHY-to-MAC words and MAC-to-PHY words are each 12 bits wide (Figures 1, 2, & 19; column 11, line 40 to column 14, line 10; column 44, line 49 to column 45, line 65). It would have been obvious to one with ordinary skill in the art at the time the invention was made to include the 12 bit words of Rubin with the system of Boucher, because it is the average of the two standards (8 bit words & 16 bit words) used in data communication, which in turn, allows for more data bits to be transferred than the 8 bit word, and no bits to be left unused with the 16 bit word. See *In re Rose*, 220 F.2d 459, 463, 105 USPQ 237, 240 (CCPA 195).

21. Regarding claim 4, Boucher teaches a transmit cycle field in bit position 9 (column 13, lines 37-55; column 17, lines 35-67). It would be obvious to one with ordinary skill in the art at the time the invention was made to place the transmit cycle field bit in any bit position as long as it was consistent throughout the system. See *In re Japikse*, 181 F.2d 1019, 1023, 86 USPQ 70, 73 (CCPA 1950).

22. As per claim 6, Boucher does not teach wherein the PHY-to-MAC words include equal speed mode PHY-to-MAC words, wherein an equal speed mode PHY-to-MAC word received by the MAC from the PHY indicates that the MAC is to provide data in the next MAC-to-PHY word; and

the PHY-to-MAC and MAC-to-PHY words are each 12 bits wide.

23. Rubin teaches wherein the PHY-to-MAC words include equal speed mode PHY-to-MAC words (Figures 1, 2, & 19; column 11, line 40 to column 14, line 10; column 44, line 49 to column 45, line 65); and

PHY-to-MAC words are each 12 bits wide (Figures 1, 2, & 19; column 11, line 40 to column 14, line 10; column 44, line 49 to column 45, line 65). It would have been obvious to one with ordinary skill in the art at the time the invention was made to include the 12 bit words of Rubin with the system of Boucher, because it is the average of the two standards (8 bit words & 16 bit words) used in data communication, which in turn, allows for more data bits to be transferred than the 8 bit word, and no bits to be left unused with the 16 bit word. See *In re Rose*, 220 F.2d 459, 463, 105 USPQ 237, 240 (CCPA 195).

24. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boucher in view of Findlater.

25. With regards to claim 5, Boucher does not teach the slow mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, and a receive data valid field in bit position eleven.

26. Findlater teaches the slow mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, and a receive data valid field in bit position eleven (Figure 2; column 2, line 18 to column 4, line 14). It would be obvious to one with ordinary skill in the art at the time the invention was made to place the aforementioned bits in any bit position as long as it was consistent throughout the system. See *In re Japikse*, 181 F.2d 1019, 1023, 86 USPQ 70, 73 (CCPA 1950).

27. With regards to claim 7, Boucher does not teach the slow mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, and a receive data valid field in bit position eleven;

the equal speed mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, a receive data valid field in bit position eleven, and a management frames protocol data out field in bit position nine.

28. Findlater teaches the slow mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, and a receive data valid field in bit position eleven (Figure 2; column 2, line 18 to column 4, line 14);

the equal speed mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a

receive cycle field in bit position ten, a receive data valid field in bit position eleven, and a management frames protocol data out field in bit position nine (Figures 2 & 7; column 2, line 18 to column 4, line 14; column 11, lines 7-47). It would be obvious to one with ordinary skill in the art at the time the invention was made to place the aforementioned bits in any bit position as long as it was consistent throughout the system. See *In re Japikse*, 181 F.2d 1019, 1023, 86 USPQ 70, 73 (CCPA 1950).

29. Claims 10 through 14 are rejected for similar reasons stated above.

30. Claims 17 through 21 are rejected for similar reasons stated above.

Conclusion

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

32. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (703) 305-7704. The examiner can normally be reached on Monday thru Thursday 7-5.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (703) 305-9648. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

35. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Christian La Forgia
Patent Examiner
Art Unit 2131

clf

AYAZ SHEIKH
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